



2019 Water Quality Report UGS North, PWSID# PA1150137 and PA1150195

*Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo ó hable con alguien que lo entienda bien.*

About Your Drinking Water

Aqua Pennsylvania, Inc. (Aqua) is pleased to provide you with important information about your drinking water in this 2019 Consumer Confidence Report for the Utility Group Services (UGS) North Division. This Division is comprised of the following water systems: Friendship (public water supply ID# PA1150137) and Honeybrook (PWSID# PA1150195). The report summarizes the quality of water Aqua provided in 2019 - including details about water sources, what the water at your tap contains, and how it compares to standards set by regulatory agencies. Although the report lists only those regulated substances that were detected in your water, we test for more than what is reported. This report is only a summary of our testing during 2019. If you have any questions about the information in this report, please call 610.645.4248 or visit our website at AquaAmerica.com.

Sources of Supply

Water for the UGS North Division comes primarily from groundwater supplies (eight wells) but is also supplemented with water purchased from the Downingtown Municipal Water Authority (DMWA), public water supply ID# PA1150026. The supply from DMWA comes from the Brandywine Creek and Marsh Creek Reservoir. The Pennsylvania Department of Environmental Protection (DEP) has completed source water assessments for these systems. Information on source water assessments is available on the DEP website at www.dep.pa.gov (DEP keyword "Source Water Assessment Summary Reports"). Completed reports are distributed to municipalities, water suppliers, local planning agencies, and DEP offices. Copies of the reports are available for review at the DEP Southeast Regional Office, Records Management Unit (484.250.5900).

The sources of drinking water (tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. Radon is not regulated in drinking water. It is a radioactive gas that you cannot see, taste, or smell. Most radon enters homes directly from underground. Radon can be released into the air from tap water. Generally, tap water is a small source of radon in indoor air.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 800.426.4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800.426.4791).

The following table lists contaminants that were detected in your water system. The table provides the average of the sources used to supply the Division as well as minimum and maximum observed levels of regulated contaminants.

Aqua Pennsylvania, Inc., UGS North: Friendship PWSID#: PA1150137

Contaminants	Average Detection	Range of Detections	MCL	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Inorganic Contaminants							
Barium, ppm	0.19	0.15 – 0.22	2	2	2018	N	Erosion of natural deposits
Chromium, ppb	4.8	4.1 – 5.6	100	100	2018	N	
Nitrate, ppm	4.6	1.8 - 5.7 (a)	10	10	2019	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
a) Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.							
Radiological Contaminants							
Alpha emitters, pCi/L	2.0	0.4 – 5.4	15	0	2015, 2018	N	Erosion of natural deposits
Uranium, ppb	0.54	ND – 1.1	30	0	2018	N	
Combined radium, pCi/L	0.4	ND – 1.02	5	0	2015, 2018	N	
Disinfectant Residual – Chlorine values below reflect results from routine monthly distribution sampling at multiple sites.							
Chlorine, ppm	1.6	1.4 – 1.8	MRDL = 4	MRDLG = 4	2019	N	Water additive used to control microbes
Disinfection Byproducts							
Haloacetic acids, ppb	8	ND - 22	60	NA	2019	N	Byproduct of drinking water disinfection
Total Trihalomethanes, ppb	20	5 - 61	80	NA	2019	N	

Contaminants	Entry Point #	Minimum Residual Level Required	Lowest Level Detected	Range of Detections	Sample Date	Violation Y/N	Major Sources in Drinking Water
Entry Point Disinfectant Residual – <i>PA Ground Water Rule</i> : This rule requires that no well station operate below specific minimum free chlorine levels for more than 4 hours.							
Chlorine, ppm	101, 102, 104	0.4	0.07	0.01 – 2.6	2019	N	Water additive used to control microbes
	105	0.7	0.5	0.5 – 2.3			
	106	0.55	0.01	0.01 – 2.1			

*Disinfectant levels did not drop below minimum required level for more than 4 hours.

The average concentration of radon during 2016 was 960 pCi/L. The range was 270 – 2610 pCi/L.

Lead and Copper	90 th Percentile	Total Number of Samples	Samples Exceeding Action Level	Action Level	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Copper, ppm	0.57	24	0	1.3	1.3	2019	N	Corrosion of household plumbing
Lead, ppb	ND	24	0	15	0	2019	N	

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Aqua is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your cold water tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Aqua Pennsylvania, Inc., UGS North: Honeybrook PWSID#: PA1150195

Contaminants	Average Detection	Range of Detections	MCL	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Inorganic Contaminants							
Barium, ppm	0.05	0.04 – 0.5	2	2	2018	N	Erosion of natural deposits
Chromium, ppb	3.2	2.8 – 3.6	100	100	2018	N	
Nitrate, ppm	4.0	1.8 – 5.7 (a)	10	10	2019	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
a) Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.							
Radiological Contaminants							
Gross Alpha, pCi/L	1.0	0.5 – 1.9	15	0	2015	N	Erosion of natural deposits
Gross Beta, pCi/L	0.9	0.3 – 1.2	50 (b)	0	2015	N	Decay of natural and man-made deposits
Disinfectant Residual – Chlorine values below reflect results from routine monthly distribution sampling at multiple sites.							
Chlorine, ppm	1.6	1.3 – 2.5	MRDL = 4	MRDLG = 4	2019	N	Water additive used to control microbes
Disinfection Byproducts							
Haloacetic acids, ppb	5	NA	60	NA	2019	N	Byproduct of drinking water disinfection
Total Trihalomethanes, ppb	9	NA	80	NA	2019	N	

b) The MCL for beta particles is 4 millirems per year (a measure of radiation absorbed by the body). EPA considers 50 pCi/L to be a level of concern for beta particles.

Contaminants	Entry Point #	Minimum Residual Level Required	Lowest Level Detected	Range of Detections	Sample Date	Violation Y/N	Major Sources in Drinking Water
Entry Point Disinfectant Residual – PA Ground Water Rule: This rule requires that no well station operate below specific minimum free chlorine levels for more than 4 hours.							
Chlorine, ppm	101	0.40	0.91	0.91 – 2.31	2019	N	Water additive used to control microbes
	102	0.70	0.76	0.76 – 2.57	2019	N	

*Disinfectant levels did not drop below minimum required level for more than 4 hours.

Tap water samples were collected from homes in the service area for lead and copper testing.

Lead and Copper	90 th Percentile	Total Number of Samples	Samples Exceeding Action Level	Action Level	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Copper, ppm	0.11	11	0	1.3	1.3	2019	N	Corrosion of household plumbing
Lead, ppb	ND	11	0	15	0	2019	N	

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Aqua is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your cold water tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

The concentration of radon in the sample collected in 2015 was 190 pCi/L.

Water sources: Eight wells and a surface water supply.

Municipalities: East Brandywine, West Brandywine, Caln, and Honeybrook townships.

Downingtown Municipal Water Authority, PWSID#: PA1150026.

Contaminants	Average Detection	Range of Detections	MCL	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Turbidity, % meeting	100%	100 - 100%	TT	NA	2019	N	Soil runoff
Values above are % meeting plant performance level. The Treatment Technique requirement is 95% of samples < 0.3 NTU							
Nitrate, ppm	5.2 (a)	4.8 – 5.5	10	10	2019	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

- a) Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Total Organic Carbon (TOC)						
Contaminant	Range of % Removal Required	Range of percent removal achieved	Number of quarters out of compliance	Violation Y/N	Sample Date	Sources of Contamination
TOC	25 - 45	33 - 71	0	N	2019	Naturally present in the environment

Notes:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

Fluoride: Fluoride may help prevent tooth decay for children but can be harmful in excess. Customers in the UGS North Division receive water mostly from unfluoridated supplies, but some areas receive fluoridated water. For more information about fluoride in your tap water, call Aqua at 610.645.4248. This information may be helpful to you, your pediatrician, or your dentist in determining whether fluoride supplements or treatment are appropriate.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. Some levels are based on a running annual average.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Nitrate: (See precautionary note in table).

NA: Not applicable.

ND: Not detected.

pCi/L (picoCuries/Liter): A unit of concentration for radioactive contaminants.

ppb: A unit of concentration equal to one part per billion.

ppm: A unit of concentration equal to one part per million.

PWSID: Public water supply identification number.

Our water systems are designed and operated to deliver water to our customers' plumbing systems that complies with state and federal drinking water standards. This water is disinfected using chlorine, but it is not necessarily sterile. Customers' plumbing, including treatment devices, might remove, introduce or increase contaminants in tap water. All customers, and in particular operators of facilities like hotels and institutions serving susceptible populations (like hospitals and nursing homes), should properly operate and maintain the plumbing systems in these facilities. You can obtain additional information from the EPA's Safe Drinking Water Hotline at 800.426.4791